

SpaceNews
=====

MONDAY MAY 17, 1993

SpaceNews originates at KD2BD in Wall Township, New Jersey, USA. It is published every week and is made available for unlimited distribution.

* ARSENE PROBLEMS *

=====

Sources indicate that the ARSENE Amateur Satellite launched last week from the Kourou Space Center was sending only a weak radio signal after its deployment on Wednesday. The ARSENE French Amateur Radio club satellite was one of two deployed by an Ariane rocket that lifted off at 9:56 p.m. Tuesday (0056 GMT Wednesday).

"The signal is indeed coming from ARSENE, but it is extremely weak and not serviceable," said Jean Gruau, president of the Radio Amateur Club de l'Espace. Gruau said his group and space officials were looking at whether the satellite was improperly oriented or whether equipment was malfunctioning.

Officials report the Astra-1C satellite of the Luxembourg-based Societe Europeene des Satellites was functioning normally, however.

[Info via Gustavo, LW2DTZ, AMSAT-LU]

* OSCAR-13 SCHEDULE *

=====

QST *** AO-13 TRANSPONDER SCHEDULE *** 1993 May 10 - May 31

Mode-B : MA 0 to MA 130 ! Omnis MA 250 - MA 60

Mode-BS : MA 130 to MA 180 !<- S transponder; B trsp. is ON

Mode-S : MA 180 to MA 190 !<- S transponder; B trsp. is OFF

Mode-LS : MA 190 to MA 195 !<- S beacon + L transponder

Mode-JL : MA 195 to MA 210 ! Alon/Alat 210/0

Mode-B : MA 210 to MA 256 ! Move to attitude 120/0, May 31

Please don't uplink to B, MA 180-190. Interferes with mode S.

QST de G3RUH 1993 May 05. Magnetorquing from attitude 180/0 to 210/0 will commence on May 08 [Sat] 2009 utc, orbit 3752/224, and will continue for 6 perigees. Estimated interim attitudes will be (accuracy +/- 5 deg): Orbit Alon/Alat 3752 180/+3, 3753 185/+3, 3754 189/+2, 3755 194/+2, 3756 199/+1, 3757 204/0, 3758 209/-1. The new schedule will be uploaded

during mode-L, orbit 3756, so it (only) will contain two mode-JLS sessions: MA 130-150 and 190-210.

QST de G3RUH 1993 May 05. Mode S will be ON for nearly 3 hours, MA 130 to MA 195. New stations appear daily.

MA 130-180 you will have to endure the coupling from Mode-B users operating at 145.880 - 145.920 MHz. Either work between them, use as test signals or go x-band.

MA 180-190 is Mode S transponder exclusive (plus B beacon).

MA 190-195 is Mode S beacon (plus mode-L transponder).

73 de James G3RUH, Graham VK5AGR and Peter DB20S

★ FO-20 SCHEDULE ★

=====

The following is the latest Fuji-OSCAR-20 operating schedule:

Mode JA (Analog Transponder Mode ON):

19May93 10:20 UTC -to- 20May93 10:40 UTC

26May93 10:50 UTC -to- 27May93 11:08 UTC

Mode JD (Digital Transponder and Mailbox ON):

Available on all orbits except during those time periods noted above.

[Info via Kazu, JJ1WTK/3]

★ SpaceNews NEWS ★

=====

I would like to thank all those who have send letters and other messages of support to me in the last few months. I have been VERY busy this year with extra work that has left me little time for much else. I apologize for not responding individually to each message received. I would also like to thank all those who forward interesting news items to me every week. I don't always have the space to include every item, but I do appreciate receiving them.

In addition, my SpaceNews editing and distribution processes have been modified in the past several months. For the past five years, SpaceNews has been written entirely on a Commodore 64 computer. I am now using a variety of different computers for editing and news gathering, and the transition seems to have gone well.

de John, KD2BD

* FEEDBACK/INPUT WELCOMED *

=====

Mail to SpaceNews should be directed to the editor (John, KD2BD) via any of the following paths:

FAX : 1-908-747-7107
UUCP : ...catfish.ocpt.ccur.com!ka2qhd!kd2bd
PACKET : KD2BD @ NN2Z.NJ.USA.NA
INTERNET : kd2bd@ka2qhd.ocpt.ccur.com -or- kd2bd@amsat.org

MAIL : John A. Magliacane, KD2BD
Department of Engineering and Technology
Advanced Technology Center
Brookdale Community College
Lincroft, New Jersey 07738
U.S.A.

<<= SpaceNews: The first amateur newsletter read in space! -=>>

/EX

--

John A. Magliacane, KD2BD * /\ / * Voice : 1-908-224-2948
Advanced Technology Center |/\ / Packet : KD2BD @ NN2Z.NJ.USA.NA
Brookdale Community College |/\ / Internet: kd2bd@ka2qhd.ocpt.ccur.com
Lincroft, NJ 07738 * /\ / * Morse : -.- -.. ..--- -... -..

Date: Fri, 14 May 1993 05:23:55 GMT
From: elroy.jpl.nasa.gov!usc!wupost!emory!news-feed-1.peachnet.edu!concert!samba!
usenet@ames.arpa
Subject: Charger time for Alinco DJ-580T
To: info-hams@ucsd.edu

>>Hi. I just purchased a 12v 800ma ni-cad for my Alinco DJ-580T ht. I'm not

>+-----+

Boyoboy, I bet the back of your rig gets hotter than heck! Watch the Hi
Power setting on it....I have the 7.2 1500ma pack from Periphrex

73 Scott KM6ZD

--

The opinions expressed are not necessarily those of the University of

North Carolina at Chapel Hill, the Campus Office for Information
Technology, or the Experimental Bulletin Board Service.
internet: laUNCHpad.unc.edu or 152.2.22.80

Date: Fri, 14 May 1993 15:08:17 GMT
From: spsgate!mogate!newsgate!usenet@uunet.uu.net
Subject: G5RV
To: info-hams@ucsd.edu

In article <1svg6bINN7vd@crcnis1.unl.edu> mcduffie@unl.edu (gary mcduffie)
writes:

> ...
> I also use a G5RV with very good results on the low bands. Mine is
> double sized, because I wanted it to work well on 160 and didn't care
> much about what it did on the higher ones. The wires are 104' per side
> and fed with double length 450 ohm ladder line. I defy all the advice
> in the books/articles to get it into the house though. I use a Radio
> Works Balun just outside the shack window and feed it with 16 feet of
> 9913 coax (just what was handy).
> ...

Sorry, but what you describe is not a G5RV, it's a variation on a double
Zepp antenna. They do work well, but they're not G5RV's.

Mark AA7TA

Date: 13 May 93 14:20:21 GMT
From: dds1!indep1!clifto@uunet.uu.net
Subject: Going about building your first transceiver??
To: info-hams@ucsd.edu

In article <1993May12.063027.15378@ke4zv.uucp> gary@ke4zv.UUCP (Gary Coffman)
writes:

:
:While good receivers are easier to build today than in the past, I'd

I disagree, to some extent. Although there are a lot of steps taken out
of the process (finding/bending a chassis, drilling and punching holes,
mounting tube sockets, etc.), the receivers of the past simply weren't
as sensitive and didn't have the noise figures (front end) of today's.
Today, the wrong layout or one noisy resistor or slight mishandling
of a IGFET can reduce your project from potentially outrageously good
performance to the mediocre performance of yesterday's receivers (by
comparison, of course).

That said, there are some nice building blocks to work with, like

Toyo's helical filter-in-a-can, prebuilt IF strips, PLLs and ICs in general, and the like, than can ease a lot of the process (especially the tedium of making a zillion hand-wired connections).

:suggest you build a simple transmitter first and use it with a commercial receiver before embarking on the transceiver project. While there are a

Agreed! But I recommend that there be someone in the wings with at least an oscilloscope who can check the output for nonlinearity and look for good shielding practice, etc.

:good number of solid state designs in the Handbook and DeMaw's books, :I think everyone should experience the warm glow of vacuum tubes at :least once. A good starter rig would use a 12AT7 as oscillator/buffer,

Not too bad an idea, but if he runs into trouble, who's around to help him troubleshoot it? Not too many people today could interpolate the theory of tube operation with a -40V bias on a control grid and understand how the tube could ever conduct, for example.

However, tubes ARE more forgiving of mistakes and won't blow out at the first misconnection (generally speaking :-).

:and a 1625 as the PA stage, see the 1962 Handbook. This would be capable :of running 50 watts on the Novice bands. There's nothing tricky about this :design, and it could even be built "breadboard" style as in the old days. :You'd still want to package it in perforated metal, available at the hardware :store, for shielding and electrical safety, but you could avoid having to :learn chassis punching and other complex metal work by building the actual :circuits on a plank.

Or perfboard, if he's careful. (Those Greenlee punches are damned expensive these days!)

:If you'd rather build solid state on circuit board, there are a number of :designs available in the 1 to 5 watt range that have appeared in QST and :elsewhere. FAR Circuits among others offers bare boards. Solid state is less :forgiving of errors than tubes, with a single slip meaning new devices, but :the low voltages are safer for the novice builder. Once you get into higher :power, the high currents used in solid state rigs can be hazardous however.

Not sure what you mean here. I'd gladly jump out of a swimming pool and grab my 12V, 800A car battery, one terminal in each hand; but I wouldn't grab the screen grid of a pentode for all the tea in China, much less rub the plate cap of a power output tube. I assume you mean "use fuses liberally", or "use a prebuilt power supply with current limiting to avoid smoke".

:On the receiver front, single conversion superhets and DC receiver designs

:abound in the literature. Taming the high gains involved in these designs
:can be more frustrating than dealing with the relatively low gains of a
:transmitter's stages, however, and probably should be reserved for your
:second or third building project. There are single chip designs such as
:those using the 602 that can make receiver building easy, but the challenge
:is low and skills learned small from such an approach.

Good idea, but maybe the 602 could be reserved for the third or fourth
project as he grows more sophisticated in his methods. Same for the
building blocks (e.g., IF strips), which could take a LOT of work out of
his first dual-conversion receiver.

:I'm assuming you have, or have access to, a commercial receiver or
:transceiver. That's the single most valuable bit of test equipment
:you can own, other than your brain, for RF building projects. Think
:of it as a service monitor that can measure frequency, relative signal
:strength, and, in the case of a transceiver, act as a signal generator.
:Trying to work without one is possible, many thousands of hams in the
:past have built their entire stations from scratch, but it certainly
:makes RF experimentation easier and more certain to have one on the
:bench.

Don't forget the dummy load, to avoid overloading the front end of the
receiver/transceiver, in the case of the transmitter project. After
finishing my brand-new Knight T60A years ago, I thought I was getting out
fine... until someone from four miles away called and let me know that my
40-meter transmissions were overloading his receiver on 20! No way for me
to tell, 'cause my transmitter would overload my receiver at ANY frequency
just due to proximity.

I'm SO glad to see someone ambitious enough to even attempt to brew his
own gear, even if he doesn't intend to use it forever. If he can get past
the beating-his-head-against-the-wall-figuring-out-why-it-doesn't-work
stage, he'll find the sense of accomplishment is incomparable. Reminds me
of a guy I know who, after a REAL troubleshooting accomplishment, actually
ran out of the work cubicle, beat his fists on his chest and YELLED to the
entire factory, "I'm Superman!!!"

And it's nice to see people like you jump in, not only with encouragement,
but also with constructive suggestions.

--

```
+-----+
|  Cliff Sharp  |      clifto@indep1.chi.il.us   OR  clifto@indep1.uucp   |
|    WA9PDM    |                        Use whichever one works          |
+-----+
```

Date: 14 May 93 14:49:02 GMT

From: usc!howland.reston.ans.net!noc.near.net!transfer.stratus.com!jjmhome!
schunix!kshus@network.UCSD.EDU
Subject: Need old phone patch please.
To: info-hams@ucsd.edu

I need an old phone patch - something to get 8 ohm audio into the phone line in a clear, high quality manner. I don't need vox capability for an HF rig, meters, switches or any other stuff. Just a simple, small patch or circuit with easily obtainable parts (cheap too) to accomplish this task. If you have an old phone patch laying around you would like to get rid of real cheap or have a circuit that would work, please contact me. The project is for my class at WPI here in Worcester. Chris

Date: 13 MAY 93 22:09:37 CST
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!
ux1.cso.uiuc.edu!uwm.edu!MUSIC.LIB.MATC.EDU@network.UCSD.EDU
Subject: question about Radio Shack 2-MTR HT
To: info-hams@ucsd.edu

In article <C6znoE.45L@csc.ti.com> marshal@dadd.ti.com (Marshal Peterson) writes > >Warning: This is my first post; hope it works and doesn't offend > anyone. :-) > >I've had my no-code for a year now and haven't been on the air yet. >I was intrigued by the Radio Shack HTX-202 HT and the rumors that it >will be on sale next week for \$200.

This is a fine starter radio for the price. It is very similar to the Icom 02AT. Physically, it's not the mini-radio class, and probably was built by Icom, because the battery packs are interchangeable.

Put the hole in your car and mount a 5/8 wave antenna. I prefer Larsen antennas myself. Don't waste efforts on a winshield antenna or the duckie in the car. The couple of watts from that radio will not do it for you. Get a good antenna, perhaps a power amplifier, (10 to 25 Watts output will be fine) and you are on the way to make many fine new friends.

73, Nels Harvey, WA9JOB, Vice President, Mid-America Coordination Council (MACC).

Date: Fri, 14 May 1993 14:52:20 GMT
From: usc!elroy.jpl.nasa.gov!swrinde!zaphod.mps.ohio-state.edu!cs.utexas.edu!
csc.ti.com!tilde.csc.ti.com!fstop.csc.ti.com!marshal@network.UCSD.EDU
Subject: question about Radio Shack 2-MTR HT

To: info-hams@ucsd.edu

Thanks for all the Email and response to my post concerning the Radio Shack 2M HT. I was surprised at the positive comments concerning a Radio Shack product. The only negative comments have been concerning the size and weight of the RS 2M HT, but that performance edge only comes on more expensive units.

I've had two comments that I'll need an external antenna when working from an auto. The BNC extension with suction cups to attach to the windshield just wouldn't get out very well. I've noticed cellular phones with this setup, but the short 1/3 meter wavelength probably doesn't have as much a problem penetrating the auto RF cage. Thanks to Richard Chapman for mentioning the RS 5/8 antenna being too high and suggested looking at the MFG 1/4 wave magnetic mount. I park in a parking garage and Richard has saved me some grief. Is the performance difference between a 1/4 wave and 5/8 wave appreciable in actual use? I do understand that the 5/8 wave has a better radiation pattern, but more importantly the 5/8 wave performs better on a moving object for some reason other than simply the radiation pattern (I remember reading once in ARRL handbook). Does anyone know why?

Does anyone know of a good 2M antenna at a reasonable price for an apartment? How would a mag mount for a car put on top a file cabinet work? What if metal framing was used in the construction of the building, is 2M wavelength attenuated greatly? It seems like it might be attenuated greatly since the HT won't work very well from inside a car.

The interest concerning the rumor of a \$200 price has been strong and people want to know when this will happen. I was told by a Dallas RS salesman to watch this Sunday's (16 Mar 93) newspaper for an RS advertisement and also that the sale would only last a week. I don't know if this is just a regional sale, since others have said their local RS don't know about the sale. Note: the possibility of a \$200 sale rumor has been corroborated by Val Breault's post. I hope the rumor is true because of the comments to date, I'm starting to drool at the thought of owning the RS 2M HT. I need clean off my keyboard and patiently wait for Sunday. :-)

Regards,
Marshal KB5TRY marshal@asic.sc.ti.com

Date: Fri, 14 May 1993 05:11:55 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!usenet.ins.cwru.edu!magnus.acs.ohio-state.edu!csn!teal.csn.org!joelf@network.UCSD.EDU
Subject: question about Radio Shack 2-MTR HT
To: info-hams@ucsd.edu

>marshal@dadd.ti.com (Marshal Peterson) writes:

>

> [deleted Stuff]

>

> Also, does a 2M HT work very well from inside the vehicle? I noticed
> that RS has a BNC extension with suction cups to attach to the
> windshield, would that help? RS had a magnetic mount 2M 5/8 wave
> antenna, has any one had experience with it? Tendency to scratch,
> performance, etc.

I have been using the RS 2M 5/8 wave antenna for about a year now and signal reports are reasonably good. I mounted the thing on the trunk lid and then put a connector on the inside of the hatch. I then ran coax up to the drivers compartment and connect a speaker mike to the radio. The reason I put the hatch connector on was to allow the antenna to be easily removed (for washing or non-vehicle event support) while having a somewhat permanent (sp) installation.

73 -- Joel (N0QLS)

Date: 14 May 93 20:35:49 GMT

From: netcomsv!attain!icd.teradyne.com!news@decwrl.dec.com

Subject: question about Radio Shack 2-MTR HT

To: info-hams@ucsd.edu

In article <9305121559.AA00688@ginzo.wellfleet> ginsburg@wellfleet.COM (Scott Ginsburg) writes:

-I recently purchased a Radio Shack HTX-202 HT and last night discovered
-that the receiver is swamped with noise from both my NCD X Terminal monitor
-and my IBM XT monitor to the point that I'm not sure I could use it on
-packet with my current computer equipment. Has anyone else with an HTX-202
-experienced similar problems, and if so have the problems been solved?

Sounds like what happened with mine. My HTX202 used to open the squelch (with the knob fully clockwise) whenever it was within 6 feet from a computer (including, fortunately, the POS terminals at Radio Shack) I took it in for service (extended warranty), and it came back with the same problem. Handed it back again, and this time, when it returned (they changed the CPU and some other illegible stuff), it was even worse. This time (2.5 months later) I asked for it to be replaced. Their policy is to replace it only after it can't be fixed the third time, but a few phone calls to Texas and the local service center convinced the manager to give me a new one (fresh from the box). The new one works fine, and only has squelch problems within 6 inches of the monitor.

On the other hand, there are quite a few people who don't have this problem.

Good luck.

/mike

(BTW, it isn't S/N 10006203, purchased at the Galleria Mall Rat Shack :-)

--

\\|/ Michael L. Ardai N1IST Teradyne ATG Boston

/|\ ardai@maven.dnet.teradyne.com

Date: Fri, 14 May 1993 15:10:46 GMT

From: spsgate!mogate!newsgate!usenet@uunet.uu.net

Subject: Radio Shack 70cm HT?

To: info-hams@ucsd.edu

I saw a packet posting yesterday about a Radio Shack 70cm HT. Supposedly they are starting to sell them. The poster gave a model number and a price...\$299.95. Sounded like a 70cm version of the 2M one. Anyone here know anything about it?

Mark AA7TA

Date: Thu, 13 May 1993 18:26:33 GMT

From: elroy.jpl.nasa.gov!sdd.hp.com!hpscit.sc.hp.com!hplextra!hpfcsol

myers@ames.arpa

Subject: What is circular polarization?

To: info-hams@ucsd.edu

The polarization of the an EM wave is defined to be the polarization of the electric-field component of that wave; in other words, the plane of polarization is that plane in which the E-field "lies."

In most simple antennas, the plane of the E-field does not change; for example, in a dipole antenna, the E-field is created "between the ends" of the antenna (as they are at equal but opposite potentials, wrt to the feed point), and so the polarization is in the same plane as the antenna itself - a horizontal dipole produces a horizontally-polarized signal.

Some antennas, however, produce a signal which has the property of changing polarization with time, as seen by an observer at any fixed point. The simplest one to understand is the helical antenna, which produces a circularly-polarized signal; the plane of the E-field changes with time, rotating from horizontal to vertical and around again and again. Circular polarization comes in two basic "flavors", depending on whether the

rotation is clockwise or counter clockwise - these are typically referred to as "right hand" and "left hand" circ. polarizations, which works the same ways as the threads on a screw.

To understand how the polarization changes, consider what happens as the original signal travels down the helical radiating element; follow a given "peak" in the wave, and note that it moves around in a circle as it travels along the element. Clearly, the E-field produced between this peak and some other point must also be rotating in a similar manner. This rotation, remember, is simply how the field appears to a fixed observer; the polarization of a given point in the wavefront does NOT change as it moves past any point (or ever, for that matter), but the corresponding "point" a tiny period of time later will show slightly different polarization - hence the appearance of rotation.

Bob Myers	KC0EW	Hewlett-Packard Co.	Opinions expressed here are not
		Systems Technology Div.	those of my employer or any other
myers@fc.hp.com		Fort Collins, Colorado	sentient life-form on this planet.

Date: Fri, 14 May 1993 05:38:51 GMT
From: elroy.jpl.nasa.gov!usc!howland.reston.ans.net!europa.eng.gtefsd.com!emory!
news-feed-1.peachnet.edu!concert!samba!usenet@ames.arpa
To: info-hams@ucsd.edu

References <1993May4.214110.9163@news.nd.edu>, <JFRc4B1w165w@jackatak.raider.net>,
<C6vGz1.7Ku@raistlin.udev.cdc.com>.com
Subject : Re: no-code defense

In article <C6vGz1.7Ku@raistlin.udev.cdc.com> molson@bml4380.cpg.cdc.com (Mark Olson) writes:
>In article <JFRc4B1w165w@jackatak.raider.net>, bwm_ptg@jackatak.raider.net (Bruce W. Martin) writes:
>|> rnimtz@hilbert.helios.nd.edu (richard nimtz) writes:
>|>
>|> > In article <930503.162837.6v1.rusnews.w165w@garlic.sbs.com>
system@garlic.sbs
>|> > >jherman@uhunix.uhcc.Hawaii.Edu (Jeff Herman) writes:
>|> > >
>|> > >> So, ladies and gentlemen, why don't we take an informal poll here on
>|> > >> the net: give your callsign and state whether you support the no-code
>|> > >> license or feel it was a bad idea. I'll start:
>|> > >>
>|> > >> I'm NH6IL and I'm against the no-code license.
>|> > >
>|> > > I'm KD1NR and I'm against the no-code license.

>|> > >
>|> > I'm N9??? (the license is in the mail) and for no-code.
>|>
>|> I am KD4WYG/AA and I am for the no-code tech license
>|>
>I am AA0MH and I am for the no-code tech license.

I am KM6ZD/AE, and I am FOR the code-free Technician class license.

--

The opinions expressed are not necessarily those of the University of
North Carolina at Chapel Hill, the Campus Office for Information
Technology, or the Experimental Bulletin Board Service.
internet: laUNChpad.unc.edu or 152.2.22.80

End of Info-Hams Digest V93 #584
